

May 11, 2010

United States Senate Committee on Indian Affairs  
Senator Byron L. Dorgan, Chairman  
838 Hart Office Building  
Washington, D.C. 20510

Dear Mr. Chairman and Committee Members,

I wish to thank the committee for the opportunity to testify on Indian school safety. For twenty-six years, I had the privilege to serve as Chief of Safety and Risk Management for the Bureau of Indian Affairs. During my tenure at B.I.A. we were able to effect many changes to enhance the safety of Indian children in schools. The first of those major accomplishments was to adopt national consensus building safety codes for all schools where none had existed previously. Another major step was to develop and implement a policy requiring that all new school construction include fire protection automatic sprinkler systems. The fire protection sprinkler requirement was a ground breaking accomplishment. Today that requirement is more stringent than requirements for public schools nation-wide.

Education in Indian Country presents many challenges that are not faced by most public schools in America. Unlike public schools, a majority Indian schools are located in remote reservation areas that are not served by conventional infrastructure. Most Indian communities lack professional fire protection, emergency medical services and other community based services that are available to most American communities. This means that many Indian communities have no mutual aid from surrounding jurisdictions and may be from tens of minutes to an hour away from receiving emergency assistance. The remoteness factor casues a significant elevation in the risk assessment for Indian children attending reservation schools.

There will be nothing in my testimony today that is new or unknown to the Bureau of Indian Affairs. Over the past twenty or so years, there have been numerous reports by the Department of the Interior Inspector General citing deficiencies in Indian school safety. Additionally, there are internal reports issued by B.I.A. task groups, the Department of the Interior Safety Office, and the B.I.A. Division of Safety and Risk Management. All of these reports should be available to the committee for your review and consideration from the Department of the Interior and the Bureau of Indian Affairs.

I will attempt to group items in my testimony in order of potential risk posed by deficiencies in Indian schools with the highest risk being listed first. I hope that the following testimony will be helpful to the committee and welcome the opportunity to answer any questions that you may have.

Existing reports indicate that as much as 40% of fire alarm systems in Indian schools are not at full operational capability. This calls into question whether school children could be evacuated in the case of an emergency on any given day.

Many Indian schools are not being inspected for safety on an annual basis and abatement of safety hazards is not being accomplished as required in Federal Regulations. This failure means that the Bureau of Indian Affairs and the Bureau of Indian Education have incomplete data to identify the risks for children attending Indian schools. No one in government is held accountable for accomplishing the required inspections and abatement of hazards in Indian schools.

Funding is not being requested by government agencies to correct the known safety and health deficiencies in Indian schools and as I previously stated there are deficiencies existing in schools which are not known due to the lack of inspections.

There is and has been a general statement of concern for the safety and health of children attending Indian schools by the responsible government agencies. However, there has been a lack of action by those same agencies to assure that safe and healthful conditions are present in Indian schools.

Attached to this summary is a list that details four major areas which contribute hazards affecting the safety and health of children attending Indian schools.

Respectfully submitted,

Charles L. Jaynes

### Fire Alarm Systems:

At any given time up to 40% of fire alarm systems in Indian schools are either inoperative or experience some form of system failure. A study conducted by the B.I.A.'s Division of Safety and Risk Management found that many of the failed alarm systems were antiquated and that parts, components and service were no longer available for the dated systems. In addition, the study found that newer systems were overly complex and could not be maintained by the local maintenance staff at school locations. The national codes require that a functioning manual fire alarm system be provided in all education occupancies and an automatic detection system be provided in residential occupancies such as dormitories. With the advent of microprocessors and advanced electronics many manufacturers have produced very complicated fire alarm systems. In addition to requiring a high level of technical expertise for maintenance these new systems are very costly. The B.I.A. spends from \$20,000 to \$40,000 on average for fire alarm systems in new construction. These systems provide addressible access for system diagnostics, immediate notification to emergency services and other enhancements to improve reliability and rapid response by fire, EMS and public safety organizations. These systems serve an important function if the facility is located in Arlington, Virginia, Phoenix, Arizona or Rapid City, South Dakota because those communities have the available infrastructure to respond. I have however questioned the wisdom of purchasing such systems where the alarm system transmits a signal to a non-existent fire department. The addressible diagnostic function is of little value to maintenance personnel who lack an understanding of microprocessor technology and have not had sufficient training to utilize the systems diagnostic functions. These issues are compounded when an Indian school is a boarding facility. The B.I.A. is one of few, if not the only education system that boards elementary age school children. Elementary age children are very difficult to arouse from sleep and once awake, they tend to be confused and disoriented. Early detection of smoke and fire is an essential life saving function for small children.

My assessment of the value of fire alarm systems in Indian schools has always led me to the conclusion that the system should provide immediate notification of an emergency to the staff and students of schools so that they could evacuate the facility and get to a point of safety without delay. A system costing \$40,000 can not accomplish this task if it is not functioning properly and can not be maintained. Most all manufacturers of fire alarm systems offer a simple alarm system that meets code requirements. These simple systems cost in the range of \$5000 to \$10,000 and are easily maintained with a minimum amount for training for local personnel. The important consideration is that systems must be reliable, for a system that is inoperable provides a sense of false security to the staff and students.

### Emphasis On Safety

I have always disliked the term “Risk Management” when it applies to the safety of children in schools. I have always believed that a policy of eliminating risk was the proper philosophy. Most organizations with an effective safety program have adopted this view of risk. Placing the safety function at an organizational level away from competing or conflicting functions is central to having an effective safety program. The commonly used phrase “Safety First” embodies this view. Throughout the 1990’s the B.I.A. safety organization reported to the Director of Administration. An internal task force report by B.I.A. found that this was the proper placement of the function. That same report warned that placing the safety function under facility management, environmental quality or personnel management could diminish the effectiveness of safety due to conflicting or competing interests. In or about 2005, the Bureau underwent a reorganization that placed safety within a new office titled “ Office of Facility Management, Environmental and Cultural Affairs”. Note that there was no mention of safety in the organizations title. This action was interpreted by many that safety was not a priority with B.I.A. The basic OSHA Act requires that the safety program be placed high enough in an organization to assure that proper staffing and other resources are available to effectively secure the proper level of safety for employees and the public. In the case of the Federal government, the regulations (see 29 CFR 1960) state that the safety program should be at the level of Assistant Secretary. When the safety function is a priority to executive management, the rest of the organization tends to place more emphasis on operating safely and eliminating risk.

The B.I.A. has developed a comprehensive data system to track safety inspection findings, monitor abatement of safety hazards and provide a mechanism to fund correction of deficiencies. The system is a major achievement and is the most comprehensive system I have seen in thirty plus years of professional safety work. The system however, can not perform the inspections, develop abatement plans and request funds. These functions require human effort. Since 1995, the level of resources available for safety have diminished at a steady pace. Safety positions at the headquarters level and at the regional office have been vacant for years. Additionally, officials in charge of schools have not been held accountable for developing safety abatement plans. This means that a system costing millions of dollars is ineffective because there is no input at some locations and where deficiencies are identified, abatement plans are not developed and entered to address correction of the identified hazards. Officials at all levels of the organization should be held accountable if safety hazards are to be eliminated.

### Elaborate School Designs

Schools have one simple function; to educate youth in an effective manner. Indian schools have fallen victim to a trend being faced by school construction nation-wide. Many times, school designs become a show place for architectural talent. B.I.A. has built schools that are shaped like buffalo, eagle wings and a variety of other designs. Many of these designs incorporate building systems that are difficult to maintain and are very costly. Some of these design features include hallways configured in an elliptical arc or similar unusual configuration. Roof designs which do not contribute to the function of the building but are purely aesthetic are common. These various design features can double the initial construction costs of schools but more importantly make the facility very difficult to maintain. These maintenance issues often contribute safety hazards once the schools come online. Water leaking from roofs into electrical and fire alarm systems is a common observation cited in safety reports. Heating, ventilation and airconditioning systems in complex designs are harder to maintain which effects fire alarm operation.

Design firms have a vested interest in elaborate designs. The design fees collected (usually 6%) are based upon the cost estimate for construction. Therefore, the more a school costs to build, the more money the design firm collects. Indian tribes may wait years for their school project to be funded for construction and subsequently they are frequently taken advantage of by project designers. Not only does this method increase the initial cost of a school, but it also negatively impacts the maintenance of the facility and subsequently increases the safety issues once the facility is occupied and used. A simple, functional design is cost effective, easy to maintain and mitigates risk by its very nature.

### School Site Selection

A large number of Indian schools are located within the Southwestern United States. The Southwest region of the country is noted for its complex geology. The geology and soil conditions are very important when selecting a building site for schools. During the last twenty or thirty years Indian Schools have been plagued by structural issues relating to differential settlement of the structures. This settlement is demonstrated by cracks in walls, foundation failure. The B.I.A. has spent millions of dollars addressing structural distress in Indian schools. These issues have been cited in numerous Inspector General Reports and yet the Bureau continues to build schools in areas where the geology is known to be unstable. A recent example of this involves the new Ft. Wingate High School. This project was built very close to the site of the existing high school. The school site is located on an unstable geologic formation that is over one hundred feet deep. The old Ft. Wingate high School experienced constant structural distress over its life since the 1960s and the Bureau spent significant resources trying to stabilize that structure. The original buildings were built on concrete piers drilled some forty feet deep. The new high school is built on the same basic geologic formation and engineered fill of several feet was provided to offer a stabilized base for the structure. This fill material was placed upon an unstable geologic formation some hundred feet thick. There was documentation raising the geologic issues before the new school was built but the

construction went forward. As time progresses, one can expect that the new school will experience safety problems related to differential settlement. Similar problems are well documented in B.I.A. files for Sanostee School, Chinle Boarding School, Alamo Community School and many others.

School site selection should involve not only traditional soils analysis but a stratigraphic review by a qualified geologist to assure that a site is suitable for school construction. This simple action could result in elimination of structural hazards as well as significant costs savings. In locations where unstable soils and questionable geology are unavoidable, there are known techniques to combat the effects of differential settlement. While these techniques may have a large front end cost, they are considered economical over the life span of a building.